

REMARKS/ARGUMENTS

Claim 15 has been amended in a non-limiting manner to emphasize that two different types of assemblies are covered by this claim.

Claims 1-15 and 29-35 are pending, although claims 29-31 have been withdrawn from consideration. Upon indication of allowable subject matter, Applicants intend to seek rejoinder of the withdrawn claims as appropriate.

The Office Action rejected claim 15 under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully submit that the above non-limiting amendment to claim 15 has rendered this rejection moot -- the amendment makes clear that the assembly can be one of two types of assemblies. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

The Office Action also rejected claims 1-7, 9-11, 15 and 32-35 under 35 U.S.C. § 102 as anticipated by, or in the alternative, under 35 U.S.C. § 103 as obvious over U.S. patent application publication no. 2002/0155299 (“Harris”), claim 8 under 35 U.S.C. § 103 as obvious over Harris in view of U.S. patent application publication no. 2003/0082587 (“Seul”), and claims 12-14 under 35 U.S.C. § 103 as obvious over Harris in view of U.S. patent no. 6,060,178 (“Krisko”). In view of the following comments, Applicants respectfully request reconsideration and withdrawal of these rejections.

The present invention relates to a coated dielectric layer having a crystallinity of greater than 90% and an RMS roughness of less than 1.5 nm. Thus, the present invention provides for dielectric layers having good crystallinity and minimal roughness at the same time. As explained in the present application, such layers having such properties considerably improve the quality of, for example, epitaxially grown metal layers on such

layers. (See, paragraph bridging pages 9-10). It is through exposure to at least one ion beam coming from an ion source, preferably a linear ion source, that the unique dielectric layers having the unique required properties are obtained. Nothing in any of the applied art teaches or suggests the claimed substrates having the required unique dielectric layer made by the required methods.

The Office Action recognized that none of the applied art teaches or suggests the required methods of obtaining the claimed coated substrates. To compensate for this deficiency, the Office Action asserted that the claims are product-by-process claims, meaning that the process limitations do not carry patentable weight. However, the processes set forth in the claims result in unique products having unique characteristics.

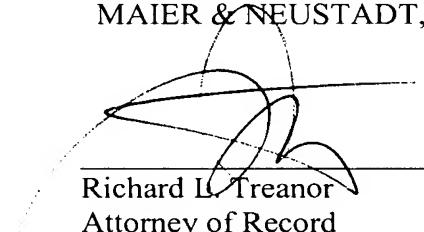
The present invention relates to products produced by methods which allow a continuously running magnetron. Thus, the present invention makes it possible to produce the claimed products having the required properties without having to change the magnetron target and/or to disrupt then reinstitute vacuum conditions. Such a process and products made by such process are nowhere taught or suggested by the applied art. None of the applied art teaches, suggests, recognizes any benefits associated with, or would lead one of ordinary skill in the art to produce the claimed products by the identified methods, with the expectation or belief that products having the required roughness and crystallinity characteristics could be efficiently produced.

In view of all of the above, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §103.

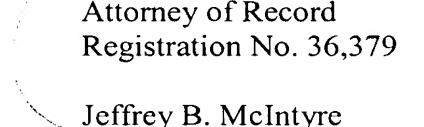
Applicants believe that the present application is in condition for allowance. Prompt and favorable consideration is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Richard L. Treanor
Attorney of Record
Registration No. 36,379



Jeffrey B. McIntyre
Registration No. 36,867

Customer Number

22850

Tel #: (703) 413-3000
Fax #: (703) 413-2220